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NORTHWEST MONTANA WILDLIFE MITIGATION PROGRAM

HABITAT PROTECTION PROJECT

Annual Report - FY 1992

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ABSTRACT

This report summarizes activities between July 1, 1991 through June 30, 1992 for the Habitat Protection Project, Northwest Montana Wildlife Mitigation Program.
The Habitat Protection project is based upon mitigation plans developed for Hungry Horse and Libby dams which recognized that, in some cases, species require unique habitats that are not generally available on National Forest lands adjacent to the reservoirs. For these species the preferred mitigation strategy involved protection off-site of rare, threatened or high priority habitats.

Specific program goals, as outlined in the Columbia River Basin Fish and Wildlife Program are to:

- Protect and/or enhance 4,564 acres of prime wetland habitat within the Flathead Valley;
- Protect 2,462 acres of prairie habitat within the vicinity of the Tobacco Plains for Columbian sharp-tailed grouse;
- Protect 8,590 acres of riparian habitat and travel corridors through the acquisition of conservation easements for grizzly and black bears; and,
- Protect 11,500 acres of selected old growth forest stands for terrestrial furbearers through cooperative agreements with state, federal and private landowners.

Four objectives of the Habitat Protection Project were addressed during this year:

1. Complete the graduate student research project to identify critical habitat to preserve and enhance the Tobacco Plains grouse population.
2. Develop an implementation plan for Columbian sharp-tailed grouse based on data obtained during previous research.
3. Implement grouse habitat protection strategies on the Tobacco Plains.
4. Implement a wetland project.

The graduate student research project to identify critical habitat for Columbian sharp-tailed grouse was completed. This two year research project documented the success of augmentation efforts and provided information on habitat use by transplanted grouse. Only 2 out of 21 transplanted grouse dispersed from the area. Numbers of grouse observed in the Tobacco Plains increased from one dancing ground supporting 4 males and no females observed in 1987 to two dancing grounds and a total of 22 sharptails observed in 1991. However, numbers of grouse on the new dancing ground declined dramatically in 1992; only 5 males were observed in April. Decline in grouse numbers on the new dancing ground was likely due to a high mortality rate with reduced security cover on overgrazed pastures. The research documented the importance of native grasslands for nesting, brood rearing and winter habitat. All nests (n=7) were found in native grasslands that had received little or

no grazing pressure. Pockets of deciduous shrubs in the native grasslands were important during brood rearing. The native grasslands were also occupied by grass during mild winters when little snow covered the valley floor.

An implementation plan providing guidelines for grouse mitigation activities was completed. Based on this plan enhancement projects on Department of State lands and Kootenai National Forest lands were initiated. Two projects on private lands, including a cooperative agreement with the Nature Conservancy to manage 680 acres of grouse habitat and a riparian enhancement project were also developed.

Three wetland projects were considered this year. An enhancement project on the Kootenai National Forest was turned down due to lack of substantial benefits to wetlands or waterfowl. A second project to acquire and enhance wetlands on farmland in Lake County was terminated when the landowner decided to sell to another party. A third project to restore drained wetlands on 850 acres (McGregor Meadows Ranch) is ongoing.

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INTRODUCTION

This habitat protection project is one of three ongoing projects to address wildlife impacts related to Hungry Horse and Libby dams under the Northwest Montana Mitigation Program. The two other projects, Hungry Horse Habitat Enhancement and Libby Habitat Enhancement, involve mitigation activities through habitat enhancement on public lands adjacent to the reservoirs.

Mitigation plans developed for Hungry Horse and Libby dams recognized that in some cases, species require unique habitats that are not generally available on National Forest lands adjacent to the reservoirs (Bissel and Yde 1985, Mundinger and Yde 1985). For these species the preferred mitigation strategy involved protection off-site of rare, threatened or high priority habitats.

In the mitigation plans, habitat protection was defined as long term agreements to secure seriously threatened existing critical habitat or the enhancement of degraded habitat. Protection could be achieved through fee acquisition, conservation easements, or lease agreements as long as long term protection of critical habitat for wildlife species is achieved (Wood 1990). For some species the highest priority management direction was to maintain or improve populations by protecting threatened critical habitat which in many cases in found on private lands.

Specific program goals, as outlined in the Fish and Wildlife Program (NPPC 1987) include:

- Protect and/or enhance 4,564 acres of prime wetland habitat within the Flathead Valley.
- Protect, 2,462 acres of prairie habitat within the vicinity of the Tobacco Plains for Columbian sharp-tailed grouse.
- Protect 8,590 acres of riparian habitat and travel corridors through the acquisition of conservation easements for grizzly and black bears.
- Protect 11,500 acres of selected old growth forest stands for terrestrial furbearers through cooperative agreements with state, federal and private landowners.

During this report period, we concentrated efforts on two areas of the program: palouse prairie/Columbian sharp-tailed grouse and wetlands/waterfowl.

PROJECT OBJECTIVES

This report summarizes activities during the period July 1, 1991 through June 30, 1992. The primary project objectives during this period were to:

1. Complete the graduate student research project to identify critical habitat to preserve and enhance the Tobacco Plains grouse population.
2. Develop an implementation plan for Columbian sharp-tailed grouse based on data obtained during previous research.
3. Implement grouse habitat protection strategies on the Tobacco Plains.
4. Implement a wetland project.

Since we are starting the third year of implementing habitat protection projects, this report also includes a discussion of what we have learned about the process to date and includes recommendations for future activities.

COLUMBIAN SHARP-TAILED GROUSE PROGRAM

INTRODUCTION

Construction of Libby Dam resulted in the loss of 4,743 acres of sharp-tailed grouse habitat including grasslands and riparian tree/shrub communities. By the time the mitigation plans were developed, the Tobacco Plains Columbian grouse population had seriously declined primarily as a result of habitat loss and overgrazing of native grasslands (Manley and Wood 1990).

Early mitigation efforts were aimed at documenting the current status of the Tobacco Plains population, it's historical abundance and distribution and the results of previous grouse augmentation efforts by The Nature Conservancy. The current focus of the program has three phases: 1) continue to obtain information on nesting and brood-rearing habitat; 2) develop a plan which outlines strategies to benefit the Tobacco Plains grouse population, and; 3) implement those strategies.

METHODS

Mick Cope, Montana State University graduate student, continued field work through July and August. Methods used to monitor radio-equipped grouse and describe habitat use are described in his thesis (Cope 1992).

Limited field work was conducted to gather information on over-winter survival of radio-equipped grouse, winter habitat use, and dancing ground attendance. Radio-equipped grouse were located during numerous ground surveys completed by Lewis Young, Kootenai National Forest, or myself.

Dancing ground surveys were conducted during early morning between March 3, and April 29, 1992, to obtain counts of grouse attending the dancing ground and to record observed marked grouse (colored leg bands). Taped recordings of grouse vocalizations were not used this year.

Sharp-tailed grouse transplanted from British Columbian in 1991 exhibited a 42% survival rate (Cope 1992). However, no grouse transplanted from Idaho in 1992 survived longer than 40 days (Wood 1992). We wanted to test the hypothesis that survival rates did not differ between grouse transplanted from Idaho shrub steppe communities or from British Columbia native grassland communities. Permission to trap 10 grouse from Idaho was obtained; however, the regional biologist in British Columbia felt that grouse numbers were down from the previous year and would not permit any grouse removal from an area we had previously trapped. Therefore, we canceled all trapping and transplant efforts for this year.

RESULTS

Survey and Inventory

Transplanted Grouse

A detailed analysis of the distribution, habitat selection and survival of transplanted Columbian sharp-tailed grouse in the Tobacco Valley for the period April 1990 to August 1991 is reported in a Master's thesis (Cope 1992). The following is the abstract from the thesis.

> *Distribution, habitat use and survival of transplanted Columbian Sharp-tailed grouse in the Tobacco Plains, Montana were studied from April, 1990 to August, 1991. For transplant purposes, 12 grouse (5 female and 7 male) were trapped on dancing grounds near Douglas Lake, British Columbia, Canada during spring, 1990. In April, 1991, trapping of 4 female and 2 male grouse for transplant occurred on the Sand Creek Wildlife Management Area in southeast Idaho while 3 additional males were transplanted from Douglas Lake.*
>
> *Minimum annual survival of transplanted grouse in the Tobacco Plains is relatively high (47%). High survival is possibly due to 2 factors: 1) topography and habitat characteristics that discourage dispersal and 2) the presence of limited but relatively good habitat. Two of 18 radio-equipped grouse dispersed out of the study area, while 2 others survived in the area for over 590 days. A negative correlation in distances moved between consecutive relocations and length of survival was seen in radio-equipped grouse in this study.*
>
> *Data collected during this study showed the importance of habitat associated with the Dancing Prairie Preserve. Three of 5 females transplanted in 1990 attempted to nest after being released. Nesting and brood rearing sites were characterized by dense grass cover with an average effective height $\geq$ 20 cm. Shrub cover was associated only with brood rearing sites. Overall habitat use by transplanted Columbian Sharp-tailed grouse showed an apparent avoidance of agricultural land and use of other habitat types in proportion to their availability.*

Nesting and Brood Rearing Habitat

One female grouse (#417) still carried the radio package from the previous year and she initiated a nest on May 30 in dense native grasslands (nest #3, Fig.1). This nest was destroyed by predation so no information on brood-rearing habitat was obtained. One incidental observation of a brood of 8 chicks was obtained on August 9 in native grass/shrub community in a kettle in section 26 (R27W T37N).

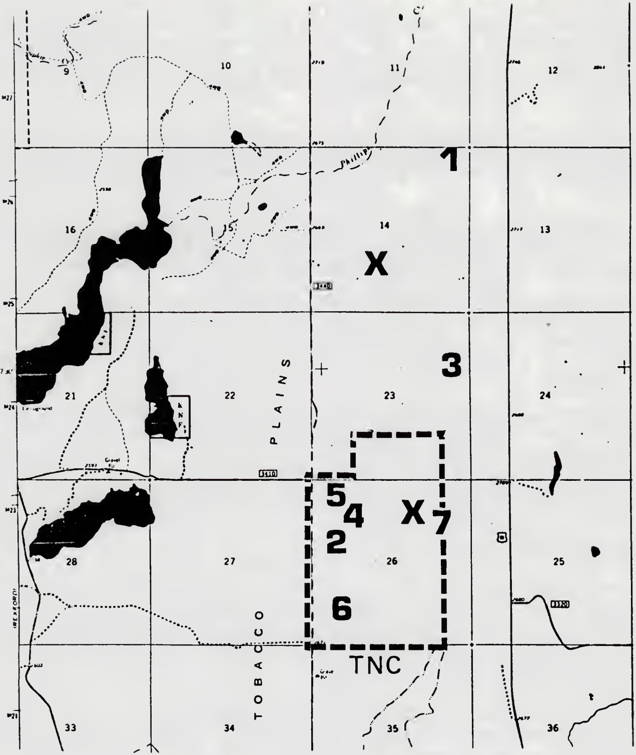

Figure 1. Dancing grounds (X) and nest site locations in the Tobacco Plains, 1990-1992.

Seven nests total were found during the entire research period (March 1990-June 1992). Most nests were located incidental to other field work (Table 1). All nests were located in native grassland habitat within 2 miles of the dancing ground. Three nests were active in 1991, 2 nests in 1990 and we were unable to date 2 of the remaining nests. Of the 7 nests, 1 successfully hatched, 4 nests failed due to predation and the fates of 2 nests were unknown.

Survival

Only two grouse, both males, remained that still carried radio transmitters. The following data were collected after August, 1991 when field work was completed by the graduate student.

Grouse #658 was trapped in April 1990 (British Columbia) and died by predation about April 11, 1992 thus surviving approximately 730 days. Twenty-three radio locations from ground observations were obtained between September 1991 and April 1992 (Appendix I).

Grouse #148 was trapped in May 1990 (British Columbia) and also died by predation about December 5, 1991 for a total of 580 days survival. Ten radio locations from ground observations were obtained between September to December 1991 (Appendix II).

Habitat Use

Both radio collared grouse exhibited a similar habitat use pattern in fall and winter. They remained on the valley floor in native grassland habitat throughout most of the fall and winter as long as the valley was snow-free. When storms left 3-4 inches of snow on the valley floor in January, grouse #658 moved to the foothills east of the valley on the Quirk Ranch. Grouse #658 attended the 2nd dancing ground site the following spring and was first located there on March 28, 1992.

Dancing Ground Surveys

During spring 1992, the dancing grounds were visited during early mornings on 8 occasions (Table 2). The peak counts on Dancing Ground #1 were observed on March 26 and April 4; 12 males were observed on both occasions. No females were observed on these dates, however, a single grouse which may have been a female was flushed northwest of the dancing ground on March 26. These counts were similar to last years high counts of 12 males and 5 females observed on April 21.

The highest count of 5 males observed on Dancing Ground #2 (north site) occurred on March 28 and included grouse #658. This number is down from a high count of 10 males and 2 females observed the previous year on April 5, 1991. Only 3 males were observed during surveys on April 15 and April 29. Because of the declining number, the section surrounding this dancing ground was searched on April 15 with a trained dog to locate other grouse or a possible satellite dancing ground. No other dancing ground was located and only 4 grouse were observed.

Table 1. Summary of sharp-tailed grouse nest data from radio-equipped grouse or incidental observations.

Nest No.	Area	Date Found	Year Active	Radio/Other	Date Initiation	Nest Fate
01	Sec.11	1990	1990	#417	May 18-30	Predation
02	Sec.26	1990	1990	#208	May 18-30	Hatch
03	Sec.23	1991	1991	#417	May 30	Predation
04	Sec.26	1991	1991	0	--	Predation
05	Sec.26	4-9-92	1991	0	--	Predation
06	Sec.26	6-4-92	Pre-92	0	--	Unknown
07	Sec.26	6-?-92	Pre-92	0	--	Unknown

Table 2. Dancing ground (DG) surveys, the Tobacco Plains, 1992.

Date	Observer	DG #1	DG #2
03-04-92	LY	0 (Grouse nearby)	Not Visited
03-26-92	MW	12 males (Single obs. NW)	0 (4 Grouse Nearby)
03-28-92	LY	Not Visited	5 males (Includes #658)
04-04-92	LY	12 Males	Not Visited
04-11-92	LY	Not Visited	4 males, 1 female
04-15-92	MW	9 males (Single obs. NW)	3 males (plus single nearby)
04-23-92	MW	8 males	3 males
04-29-92	MW	8 males	Not Visited
09-20-92	LY	0	0
10-10-92	LY,MW	2 males	0

At least 2 factors may have contributed to the reduced numbers of grouse attending the second dancing ground. Construction of the new airport facility located less than 1/2 mile west of the dancing ground began in early spring. During a dancing ground survey on March 26 we did not observe any grouse attending the ground and noted high levels of noise from the heavy construction vehicles. It is likely that even if grouse had been present we would not have heard their vocalizations. During another survey on the following Saturday, 5 grouse were observed and no construction activity was occurring. Noise disturbance may have disrupted dancing ground attendance.

We found three grouse mortalities within 1/2 mile of the dancing ground on April 15 during our search for grouse. It appeared that cattle grazing from the previous year had significantly reduced the vegetation cover surrounding this dancing ground and may have allowed greater predation on grouse occupying the area.

During all dancing ground surveys, we used binoculars and spotting scopes to identify leg bands on grouse. Vegetation cover and grouse behavior made observations of leg bands almost impossible. We did verify that at least 3 males (of 4 males and 1 female) on Dancing Ground #2 did not have leg bands on April 11.

The single female observed on April 11 on Dancing Ground #2 attended the lek for only 5 minutes and no copulation was observed.

The dancing grounds were visited in the fall on clear, cold mornings to determine whether juvenile grouse were being recruited. It is assumed that unbanded grouse o the dancing ground represent that year's juvenile males. No grouse were observed on either dancing ground on September 20. Two grouse were observed on Dancing Ground #1 on October 10 although we could not verify the presence of leg bands. No grouse were sighted on Dancing Ground #2.

Other Observations

On October 10, 1991, 10 grouse were observed near Tetrault Lake at the edge of Ponderosa Pine forest and native grassland habitat.

Habitat Protection

Implementation Plan

The Columbian Sharp-tailed Grouse Mitigation Implementation Plan for Western Montana was completed in October (Wood 1991). Existing information on the current status of Columbian sharptails was summarized and management goals and objectives were identified. For the Tobacco Plains, the management goal is to preserve the integrity of the palouse prairie habitat and the upland shrub communities for sharp-tailed grouse and other species. To achieve this goal 4 objectives were identified:

1. Conserve the existing population of Columbian sharptails and restore populations to historic levels.

2. Protect existing high quality seasonal habitats.

3. Enhance grouse habitat on marginal sites within protected areas.

4. Encourage compatible management of public lands with suitable grouse habitat.

Several general strategies to meet these management objectives were described in the implementation plan. The following projects describe specific actions taken to meet management objectives.

Public Lands Projects

Only a small portion of the Tobacco Plains is publicly owned (13%), but the existing state or federally owned lands provide an important link in managing sharp-tailed grouse. Two projects are being undertaken on public lands to enhance marginal habitat and to secure cooperative agreements to protect important sharp-tailed grouse habitat.

In June, MDFWP applied for a 15 year lease on Section 16 (R27N T37W) from the Department of State Lands (Fig. 1). This section includes approximately 500 acres of ponderosa pine forest and open grassland communities around Sophie Lake located 1.5 miles west of Dancing Ground #2. This area historical supported sharptails and we documented occasional use by transplanted grouse. The area has typically been used for livestock grazing and there is evidence that native grasslands have been plowed and planted for hay crops.

When exact details of the lease agreement have been finalized a management plan for this area will be developed. The lease cost will be determined by the Department of State Lands and wildlife mitigation funds will be used to pay the School Trust for the lease.

A second project involves the Kootenai National Forest. The Forest is currently involved in a three way trade for a property known as Doc Smiley's Ranch (Fig.1). Approximately 1400 acres will be acquired. This property historically supported a dancing ground and would provided excellent land base for an expanding population of grouse. The trades are not yet complete because of difficulty in identifying suitable public lands for exchange.

When the transaction is completed, we will develop a cooperative management plan with the Kootenai National Forest to address wildlife needs. During field reviews we identified several opportunities to enhance grassland conditions for sharptails.

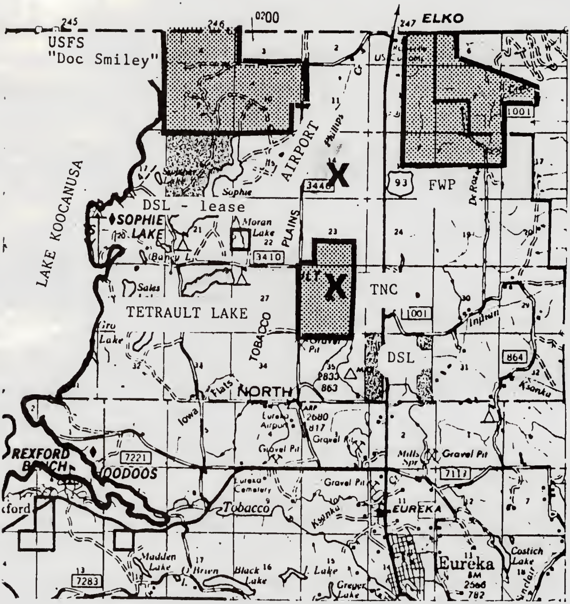

Figure 2. Public and private ownership in the Tobacco Valley, Eureka, Montana (DSL - Department of State Lands, USFS - U.S. Forest Service, MDFWP - Montana Department Fish, Wildlife and Parks, TNC - The Nature Conservancy).

Private Lands Projects

Since a majority of the Tobacco Plains is privately owned (87%) it is important to the success of this program to incorporate as many willing and supportive landowners as possible. Most of the private land is currently used for livestock grazing, although a few areas have been developed. Many areas currently grazed by livestock are in generally poor condition and provide very limited habitat for sharp-tailed grouse. Our objective is to work with private landowners to develop intent is to maintain native grasslands in private ownership for wildlife and managed livestock grazing where appropriate. To date we are actively involved in 2 projects on private lands.

The first project addresses objectives 1 and 2 of the implementation plan by protecting the primary dancing ground and surrounding nesting habitat. The project involves a cooperative agreement with The Nature Conservancy (TNC) to manage 680 acres in the Tobacco Plains for Columbian sharp-tailed grouse and other species associated with native palouse prairie. A conservation easement was proposed to secure long term managements options and still keep the property in private ownership.

A draft conservation easement was developed by TNC and FWP staff with the intent of "preserving and protecting the open space and natural features of the lands". Specific provisions to achieve this goal included the following:

1. The natural ecological features including native vegetation will be maintained.
2. Open space will be maintained by restricting any subdivision.
3. Commercial uses are prohibited.
4. Disposal of refuse or toxic materials is restricted.

A requisition for an easement appraisal was distributed to potential real estate appraisers. Three bids ranging from $4,900 to $6,500 were received. Meanwhile both TNC and FWP raised issues about the easement valuation and questioned the appropriateness of that particular protection tool in this case. The appraisal has not been completed because of ongoing easement discussions.

The second project involves habitat enhancement on private property and addresses objective 3 of the implementation plan. This project involves restoring critical winter habitat along Phillips Creek. The landowner has been contacted and is willing to allow the project although specific details concerning a cooperative agreement have not been finalized. Portions of the creek are grazed continuously from May through October each year. We propose fencing approximately 1.5 miles of the riparian zone to control livestock grazing and permit development of the deciduous shrub and tree communities. The local office of the Soil Conservation Service has expressed an interest in cost-share funding of this project.

DISCUSSION

We have identified high quality native grasslands as the key component of grouse habitat and recognize that poor quality grasslands are limiting the expansion of the grouse population. It is important to proceed with projects to improve native grasslands in poor condition and develop plans or agreements to protect those grasslands for the long term. Columbian sharptails will not continue to exist on the Tobacco Plains without a secure base of suitable grasslands. Actions taken now to provide grouse habitat and improve the status of the grouse population will reduce the potential for this subspecies to be listed under the Endangered Species Act.

Public or Private Lands

There are not enough suitable public lands within the Tobacco Plains to sustain a grouse population without incorporating compatible management on some key private lands. Within the 13% public lands, management strategies compatible with sharp-tailed grouse will be employed where possible to provide a secure habitat base. The Department of State Lands (DSL) controls approximately 1,260 acres classified as timber or agricultural within the Tobacco Plains. Most of the State lands are in poor range condition and provide only limited grouse habitat. The 500 acres of DSL lands leased and enhanced with mitigation trust funds will provide additional habitat for increasing numbers of grouse. The ongoing Forest Service exchange will increase the public land base significantly and will provide opportunity to enhance habitat not currently suitable for sharptails. The MDFWP Wildlife Management Area (1400 acres) located east of the Tobacco Plains contains native grasslands and woody draws and provides an important component of the public land base for management of Columbian sharp-tailed grouse.

It is unlikely that public land acreage in the Tobacco Plains will increase through either exchange or acquisition in the future. Opportunities to increase the public land base through exchanges are limited and difficult to complete. The Doc Smiley Exchange highlights some of the difficulties. This exchange has been in the process for nearly 4 years. Finding suitable federal lands to dispose of has been the primary stumbling block. Private land owners adjacent to isolated blocks of USFS often oppose the disposal of these lands. Other forests in the area report similar difficulties with land exchanges. Because of administrative costs, environmental issues, and growing public opposition all future proposed land exchanges will receive intense scrutiny on the Flathead National Forest (Mike Conner, Realty Specialist, Flathead National Forest).

It is not a mitigation objective to increase the public lands base through acquisition of private lands. Under the current Department administration, fee purchase of lands in the Tobacco Plains is not a high priority and the Department prefers to enter into agreements with private landowners to encourage management of those lands compatible with grouse habitat requirements. However, in a few cases acquisition may be the only alternative to insure protection of particularly threatened habitats. It must also be remembered that the private landowner ultimately decides what level of protection can occur.

Grazing Management

Currently most privately owned pastures in the Tobacco Plains are grazed on a continual basis. This grazing practice has resulted in severely overgrazed pastures which do not provide the residual cover necessary for nesting sharptails. Native grasslands will only improve under grazing management systems designed to allow recovery of native vegetation. Grazing systems (such as those described by Hormay, 1970 and others) should result in better cover for grouse, a reduction in predation losses, and increased forage for livestock. It is important to initiate a grazing system on lands occupied by grouse as soon as possible to restore native grasslands.

The largest tract (1850 acres) under single ownership on the Tobacco Plains is currently leased for grazing and includes the new dancing ground. Although currently in open space but severely overgrazed, the landowner has expressed his interest in future development of this property. In the short-term grazing management may provide some grouse habitat, however, future development of this area could result in loss of critical habitat. It will be important to secure long term protection of this native grassland to assure suitable habitat for expanding grouse distribution.

At least two other private landowners in the Tobacco Valley have expressed a commitment to continued agricultural uses on their properties. Both ranches provide important grouse habitat with livestock management practices that have maintained the native grasslands and woody draws. These areas are particularly important for grouse during winters with heavy snowfalls. Here we have an opportunity to work cooperatively with these landowners to promote grazing systems compatible with grouse habitat management.

Development

Although not as volatile as growth in Flathead County, land use changes are occurring in the Tobacco Plains. For the long term the most threatening factor to the survival of grouse is the loss of habitat, whether it is good quality or bad, to development. Grasslands converted to mobile home parks, salvage yards or 5 acre ranchettes, are not available for sharp-tailed grouse. Limited development of the Tobacco Plains is likely compatible with grouse as long as sufficient habitat remains. Total development of the Tobacco Plains would seal the fate of the local grouse population. It would be in the best interest of the grouse population to identify areas where development would have the least impact to the grouse and protect critical grasslands with conservation easements.

RECOMMENDATIONS FOR FUTURE ACTIONS

- Provide local landowners with information on grouse habitat requirements. There is a perception by some that planting shrubs or fencing small areas would provide adequate habitat. A simple brochure highlighting grouse habitat needs and describing options for landowners would be appropriate.

- A few landowners have expressed concern about the potential listing of Columbian sharp-tailed grouse under the Endangered Species Act. In one case, access to verify grouse presence has been denied due the landowners concern that federal regulations would restrict activities on his ranch. We need to develop an approach that describes the ramifications if we don't pursue habitat protection and enhancement before potential listing.

- Develop a process for recognizing private landowners who are contributing to the maintenance of quality habitat for Columbian sharp-tailed grouse. This stewardship recognition program would publicly recognize landowners for their management and encourage them to continue their practices. This step would initiate a dialogue with landowners without tying them to any long term commitments immediately. Hopefully, in time and with trust we can achieve our ultimate goal of protection for that site. There are several small parcels as well as one large ranch that currently provide good quality habitat and we need to recognize their contribution to sustaining sharp-tailed grouse.

- Work with the landowner to develop a grazing system on lands supporting the new dancing ground. The fencing project on Phillips Creek will be the first step toward providing better habitat. Immediate actions for the spring should be explored to start vegetation restoration. For the long term, we need to identify areas were development can occur without significant impacts to wildlife and negotiate long term commitments to maintaining the native grasslands.

- Identify opportunities to enhance grouse habitat on DSL lands under lease agreements. Activities may include reseeding areas with native grasses and shrubs and enhancing existing grasslands by removing conifer tree encroachment.

- Encourage the Kootenai National Forest to complete the Doc Smiley Exchange and provide technical expertise for a wildlife management plan. Several habitat enhancement activities should be explored including reseeding areas with native vegetation, removing conifer tree encroachment on native grasslands, and other wildlife species benefits actions.

- Finalize the cooperative agreement with the Nature Conservancy for management of 680 acres as soon as possible. Cost-share funding of the Conservancy's acquisitions on the Dancing Prairie Preserve will allow the Conservancy to look to other opportunities on the Tobacco Plains.

WETLANDS/WATERFOWL PROGRAM

INTRODUCTION

Hungry Horse and Libby dams together inundated approximately 15,758 acres of waterfowl habitat including ponds, marshes, islands, and riparian tree/shrub communities. The actual mitigation objective for both hydroelectric facilities was adjusted to protection of 4,564 acres of prime waterfowl habitat based on conversion of low and medium quality habitat losses to prime wetland habitat.

Public lands adjacent to the hydroelectric projects were not targeted for waterfowl projects due to the lack of suitable sites. Areas within the reservoirs were determined not suitable because of the tremendous water level fluctuations. Mitigation plans identified the Flathead Valley as the area to focus wetland mitigation because of the numerous wetlands, rivers, and potholes already important to waterfowl in the basin. In addition, wetlands in this area are threatened because of extensive human population and subdivision growth. Subdivision impacts on wetlands and waterfowl include the loss of upland nesting cover, drainage, recreational disturbances, degraded water quality from septic systems, and the introduction of domestic animals. Some highly productive wetlands in this area are being drained for irrigation or for planting crops.

RESULTS

Three wetland projects were considered during this report period: the Fortine Chain-of-Lakes project, the Bauer property and the McGregor Meadows Project (previously called the Marion site). A summary of the status of these projects follows.

Fortine Chain-of-Lakes

The first project, called the "Fortine Chain-of-Lakes", was proposed by the Kootenai National Forest and involves enhancement of approximately 200 acres of public lands located 5 miles south of Eureka. Forest biologists proposed construction of a water diversion structure in the adjacent Pinkham Creek and a series of ditches to freshen existing alkali lakes and wetlands. The intent of this project is to stabilize the water levels and provide a dependable water source to these lakes and wetlands.

A field review conducted in August 1991 by the mitigation coordinator and Kootenai National Forest biologist determined that additional engineering expertise was needed. A preliminary proposal was submitted to Ducks Unlimited and in January 1992, Ducks Unlimited representatives conducted their own field review.

Ducks Unlimited specialists (letter dated January 30, 1992) concluded that "adding water to each lake via a diversion structure on Pinkham Creek would have major adverse impacts on existing waterfowl habitat". In addition, Ducks Unlimited biologists felt that the existing mix of temporary and semi-permanent wet areas is providing both breeding pair and brood rearing habitat. This area currently supports diverse wildlife species and raising water levels is likely to reduce the diversity substantially.

Additional issues or concerns were raised which made this project unsuitable for mitigation action as it currently is described. The Montana Natural Heritage Program provided information on the presence of sensitive or rare species. At least two sensitive plant species (Scirpus nevadensis and Districlis stricta) are known to occur in the area. The area also represents an alkali environment unique in northwestern Montana. Development of this site would result in the loss the existing qualities and diversity (Dave Genter, Montana Natural Heritage Program).

These lakes were historically fishless, however, the Department has stocked the deeper lakes in recent times. There is a current concern over fishless or barren lakes expressed by the Montana Chapter of the American Fisheries Society and a desire to generally prohibit planting of fish into waters where they do not already occur.

Another issue was raised by the private livestock owner who maintains a grazing permit in this area. He expressed concern that development of this site would negatively impact his lease and grazing system.

This project was determined to be not feasible as proposed and no further action is recommended.

Bauer Property

The Bauer project is located three miles southwest of Ronan in Lake County in prairie pothole type topography. Evidence of pothole drainage and farming immediately adjacent to the existing wetlands make this property a prime candidate for wetland mitigation. The project ranked as "High Priority" on the field evaluation based on the restoration potential and the proximity to other managed wetlands. This project involves the acquisition of 280 acres of farmland from a willing seller. As a cooperator, the U.S. Fish and Wildlife Service would manage the property in perpetuity as part of the Wetland District associated with the Nine Pipes National Wildlife Refuge.

Previous discussions during Wildlife Mitigation Trust Advisory Committee (WMAC) meetings identified a concern over the economic impacts of buying a piece of farmland in private ownership and converting it to public lands. To address this concern, the Department completed a socio-economic review.

The socio-economic review followed a format similar to that required under the department's land acquisition program. Standard economic procedures were used. A draft report was presented during the October 1991 WMAC meeting and comments were taken. A final report was submitted during the April 1992 meeting. The following is a summary of the primary findings and the issues discussed (Brooks 1992):

- The current land use is grazing (17 acres) and nonirrigated cropland (263 acres).
- Payment in lieu of taxes (PILT) by the federal government would generally equal or exceed the property taxes.
- Under the current land use, it was estimated that approximately $19,700 would be spent annually in the local community for agricultural related items. The average cash value of the crop (barley and wheat) is estimated at $30,000.
- If managed as a wildlife area, an estimated return to local economies would be approximately $18,526 from management and hunter expenditures.
- Brooks concluded that the economic activity generated by this parcel would be similar whether managed as cropland or as a wildlife area. Wildlife viewing and hunting expenditures would offset current expenditures.

Further action on this project was suspended when the landowners stopped negotiations with the Department. According to Mr. Bauer, our process is too long and drawn out and he lost patience.

McGregor Meadows

This project was originally proposed by the U.S. Fish and Wildlife Service in August 1990. The proposal involves acquisition of approximately 850 acres and enhancing drained wetlands to create diverse wetland and upland habitat. Potential cooperators include the Department of Transportation, Ducks Unlimited, and the U.S. Fish and Wildlife Service. Several field reviews and evaluation were conducted. The Technical Committee and the Habitat Protection Advisory Committee both recommended proceeding with this project.

The McGregor Meadows project is located approximately 28 miles west of Kalispell (a more complete description of this project and expected benefits can be found in a project proposal on file in Kalispell headquarters office). The property is known as the McGregor Lake Ranch and has been for sale since 1986. The recent death of the landowner and the need to settle the estate had accelerated their desire to sell this property. The estate executor wished to resolve this matter quickly and stated that no other property conveyance (such as leases or easements) was of interest.

The property has historically been managed as a livestock operation. In order to improve hay production, several ditches were constructed over the years to drain the wetlands. During December 1991 ditches were again improved to increase the efficiency of draining the meadows.

The U.S. Fish and Wildlife Service completed a water rights and watershed analysis in fall 1991 and reported adequate water rights available for pond development. In addition, the FWS stated that the property's physical location in the watershed assures a sustainable year round water supply.

Under contract with FWP, Ducks Unlimited completed topographic and soils surveys and developed a conceptual plan for project design in March 1992. Based on their results, DU supports the feasibility of restoring the drained wetlands on the McGregor Meadows site. Preliminary project design involves the construction of 1-2 permanent wetland basins. Several small islands would be constructed to provide upland nesting habitat and loafing areas.

This project would result in the creation of 440 acres of semi-permanent and permanent marsh and the protection and enhancement of approximately 400 acres of upland habitat. This project would create a dynamic wetland system that will provide both breeding and migratory habitat for a variety of waterfowl and other wetland dependent species.

As part of the initial public involvement process, several steps were taken. The Flathead County Commissioners were advised of the project in April 1992 and responded in support of the project. Presentations were given to several groups including the Chain-of-Lakes Advisory Council, Montana Trappers Association, Flathead Wildlife, Inc., and Libby Rod and Gun Club. Private landowners adjacent to the site were contacted to identify any major concerns. Unsolicited comments were obtained from numerous organizations. In total we received 33 comments (Appendix II). Of those, one group (Montanans for Multiple Use) requested additional information and one landowner was opposed due to his perception that significant loss of hay lands would occur. The remaining 31 comments supported the proposed project.

The project was presented to the Wildlife Mitigation Advisory Committee for their input. During the April 1992 meeting several issues were identified:

- The Confederated Salish and Kootenai Tribe requested a cultural review of the site.
- A more detailed estimation of biological values and an analysis of incremental benefits was requested.
- Documentation of our efforts to pursue options other than fee acquisition (lease, easement) is needed.
- Potential impacts to the adjacent highway need to be addressed.
- Socio-economic concerns need to be identified and addressed.

These issues will be addressed during further development of the project.

A proposal was developed and submitted in June requesting the participation of Department of Transportation (DOT). This agency has the responsibility to mitigate wetland impacts due to highway reconstruction activities in northwestern Montana. We requested $100,000 to cost share the acquisition and development of McGregor Meadows (proposal on file Kalispell headquarters). On June 17, the Interagency Wetland Group met and unanimously supported the concept of the McGregor Meadows Project. This group is responsible for approving any wetland mitigation projects related to state or federal highway actions.

In June 1992, the property was sold to a real estate speculator. Since then the future of the McGregor Meadows project is uncertain.

DISCUSSION

The three wetland projects provide an opportunity to review the waterfowl/wetland mitigation program and looks at areas where we need to improve the process, expand our strategies, or modify the mitigation objectives. These wetland projects also provide an opportunity to identify issues, problems or information gaps that will allow us to improve our program.

Program Goals

The mitigation plans were explicit in their direction to "protect and/or enhance 4,564 acres of prime waterfowl habitat in Flathead Valley". It's clear the intent of this mitigation objective was to secure existing waterfowl habitat found on private lands in areas where development or other land use practices threatened the loss of quality habitat. This should remain as an important aspect of the wetland program although we need to recognize opportunities outside the Flathead Valley exist. One of the currently proposed projects, McGregor Meadows, lies outside the Flathead Valley. The program will be more effective by taking advantage of other opportunities where appropriate.

Opportunities to enhance, create or protect wetlands throughout the Columbia River basin should be identified and included in long range planning for wetland/waterfowl mitigation. In addition to expanding our range for appropriate projects, the program should expand the types of activities suitable for mitigation. "Prime waterfowl habitat" goals infer that areas capable of sustaining maximum populations of ducks or geese will be the primary targets. Although this aspect of the program should not be de-emphasized, it is important to recognize the other values of wetland habitats. Projects that improve water quality, increase species diversity, and provide other public benefits should be considered for the program. In some cases, habitat enhancements aimed at benefiting one group of species (waterfowl) may result in decreased benefits to other species (native fish, sensitive plants). A balance of enhanced habitats for waterfowl and restored or protected natural wetland systems should be emphasized.

By expanding our view of what is acceptable mitigation and what is not, we will also increase our options in finding suitable or willing partners in projects. Although there are several programs that emphasize waterfowl (State Duck Stamp program) there are others which focus on wetland values inclusive of waterfowl but not limited to waterfowl (Audubon wetland projects, State Department of Transportation). In fact, many of the organizations historically focused on waterfowl have recently shifted their focus to wetland systems including amphibians, native plants, shorebirds, etc. Ducks Unlimited is a good example. The North American Waterfowl Plan is also giving more emphasis to cooperative projects which result in many species benefits. This is not to say that some projects which emphasis duck production should not be a high priority or that they don't provide benefits for many other species. We need to be identify those projects which result in clear waterfowl benefits and those which may not but have significant other benefits.

Net Benefits

Not all wetland projects are necessarily good mitigation projects. It is important to remember that high priority wetland mitigation projects are those which restore degraded (drained or otherwise altered) habitats and thus result in significant improvements to both the vegetation and wildlife diversity or protects existing wetlands that are seriously threatened by loss (draining, subdivision, etc.). In many cases, changing one type of wetland (semi-permanent) to another type of wetland (permanent) may not result in significant benefits to either vegetation or wildlife diversity. In the case of the Fortine Chain-of-Lakes project, the area was already a significant wetland and development would likely reduce some of those existing qualities. There should be a thorough evaluation of existing values weighed against values achieved after enhancement. The benefit is the net or difference between current and potential values.

Management Level versus Expected Benefits

Many wetland projects require extensive management control in order to achieve the desired wetland values. Those sites that have been seriously altered may require substantial manipulations to restore the wetland system. In those cases, it may not be possible or cost effective to enter into agreements with private landowners. Projects that require diking, flooding, water rights, do not leave many opportunities for the landowner to continue his existing land use practices. Because of the intensive management required, the value of the lease or conservation easement may approach the cost of fee title. In those cases, fee-title acquisition would be the most cost effective strategy.

However, many other wetland projects will lend themselves to a range of management control that result in a range of wetland benefits. It may not be necessary to complete the maximum enhancement to achieve wildlife benefits. The single biggest factor which influences the choices is landowners preference. In some cases, the landowner may desire only to sell the property. Others may be interested in retaining some land uses compatible with the wetland values. The final decision on whether or not to pursue fee title purchase should be based on an objective evaluation of the expected wetland or wildlife benefits.

The Process

Both the Bauer and the McGregor projects highlight another problem area. Both projects are likely doomed to failure mostly due to our inability to act quickly. The Bauer project is no longer available because of the landowner's impatience with the length of our process. Mr. Bauer has chosen to market the farm to someone else because of our inability to move reasonably quickly. The McGregor ranch was acquired by a land speculator for immediate resale at a much greater price. In cases where we are proposing acquisition, we need to secure options (or something similar) on properties while we are completing the necessary feasibility analysis. The McGregor project is likely to be unavailable due to increased costs.

Public versus Private

The mitigation plans did not specify that projects be completed on public or private lands. However, the original intent to focus on the Flathead Valley emphasized the need to secure the existing wetland base on private lands and protect it from the rapid unplanned development. This aspect of the program should continue with emphasis on conservation easements to secure development rights where possible. It is unlikely that the entire mitigation goal (4,564 acres) could be achieved in this manner. Again, the limiting factor here is the number of landowners willing to participate in the program.

Other opportunities on private lands may be found outside the Flathead Valley but within the Columbia Basin system. Opportunities to enhance wetland values may be possible with cooperative landowners. However, in some cases (McGregor Meadows) fee acquisition may be the only alternative. It is unlikely that many projects of that size will be available. Private lands are limited and those with suitable restoration potential even more limited.

Public lands immediately adjacent to the reservoir were considered not suitable for wetland enhancement. That is not to say there aren't other suitable public lands for wetland projects. One of the main concerns throughout the mitigation process has been the "in lieu of" question on state or federally owned lands. It was not the intent of the mitigation program to substitute one funding source for another. However, there may be many opportunities to cooperate on projects jointly with the Forest Service or other agency. Although the Fortine Chain-of-Lakes did not appear suitable, other projects may result in overall wetland benefits.

RECOMMENDATION FOR FUTURE ACTIONS

- Potential projects on public lands (forest service, state lands, Bureau of Reclamation) will be further explored by contacting local biologists or resource managers. Potential cooperators will be provided with criteria for projects suitable for mitigation. It is also important to emphasize the need for projects that complement on-going wetland programs but do not replace existing programs. Cooperative projects on public lands should be similar to the Forest Service's "Challenge Grant Program" with federal funds matching state mitigation funds.

- Knowledge and experience gained from our efforts to implement the waterfowl mitigation aspect of habitat protection will be used to improve the program. An updated summary of objectives and strategies will provide direction for future projects. The summary should also include a description of types of wetland projects that are appropriate and potential cooperators. Opportunities and important areas (but not specific projects) to focus our efforts will also be identified.

- The Waterfowl Technical Committee will be expanded to include biologists familiar with wetland values beyond waterfowl production. Those organizations, such as Audubon, with interests and expertise in wetland values will be included in technical review of potential projects.

- Indefinitely postpone action on the Fortine Chain-of-Lakes and the Bauer project.

- As of this report writing, the McGregor Ranch has been sold. We will determine the opportunity to work with the new landowners on lease, easement, or acquisition potentials on portions of the ranch.

SUMMARY

Four main objectives of the Habitat Protection Project were addressed during this year. Two objectives concerning further refinement of implementation plans were completed. The other two objectives involved specific projects undertaken to meet implementation goals. Although individual projects were not completed during this year, many activities necessary to finish these projects were accomplished.

The graduate student research project to identify critical habitat for Columbian sharptailed grouse was completed and a final report is available (Cope 1992). This two year research project documented the success of augmentation efforts and provided information on habitat use by transplanted grouse. This information will allow us to focus our habitat protection and enhancement activities on those areas most critical for grouse survival. Cope's data documents the importance of native grasslands for nesting, brood rearing and winter habitat. Overgrazing native grasslands can have a serious impact to sharp-tailed grouse on the Tobacco Plains. Numbers of grouse on the second dancing ground declined dramatically in 1992. The area was grazed by cattle both in 1991 and 1992, however, the range condition was considerably reduced by spring 1992 because the permittee had grazed the area for a longer period of time. Grouse will establish new dancing grounds if the original ground is disturbed; however, it is unlikely that a third new ground was formed. We did not locate any new dancing ground in 1992. I suspect the decline in grouse numbers on the 2nd dancing ground is related to a high mortality rate due to reduced security cover.

Using this research information and information obtained earlier (Manley and Wood 1990) we developed an implementation plan to guide activities on the Tobacco Plains. Several projects were initiated based on this plan. Two enhancement projects on Department of State Lands and Kootenai National Forest lands were outlined. Two projects were initiated on private lands through ongoing discussions and feasibility analysis. One project involves a cooperative agreement with TNC to manage 680 acres of the most critical grouse habitat. The 2nd project involves a riparian project to protect and enhance winter habitat for grouse and other wildlife species. The importance of cooperative agreements on other private lands was identified as critical to the success of Columbian sharp-tailed grouse mitigation.

Three wetland/waterfowl projects were considered during this year. One involved enhancement of existing wetland areas on the Kootenai National Forest. This project was tabled indefinitely because of concerns over effects on existing wetland values. In fact, it was questioned whether the project would result in an actual decrease in wetland benefits. A second project involved acquisition of farmland adjacent to an existing waterfowl production area to restore drained wetland. Although determined suitable for mitigation the project was not pursued due to the landowners desire not to sell the property to the state. The third project involved acquisition of a portion of a ranch containing draining wetlands. The project would result in creation of 440 acres of wetlands and negotiations are still ongoing.

During this report period there were no habitat protection projects were completed although several projects are being developed. We are at the point when we should actively proceed with implementing both the sharp-tailed grouse and waterfowl/wetland mitigation. Further implementation planning is not needed for these species groups.

Implementation of habitat protection projects has proved more difficult than originally thought. Land transactions by nature are very complex and time consuming. Negotiations, whether for an easement or a fee acquisition, can require extensive time commitments and ultimately may not result in habitat protection. Both however, offer the best long term protection and the most management opportunities. In some cases, projects that require substantial development or enhancement activities on private lands, such as wetland projects, the most cost effective option over time would be fee acquisition and agency management.

Purchase (fee or even conservation easements) of private lands will continue to be contentious. However, it must be understood the primary threat to some habitats and some wildlife species is habitat loss due to human encroachment and development. The Flathead Valley in particular has experienced a tremendous real estate boom. According to the Flathead Board of Realtors, sales of all types of property in Flathead County rose 25% from 1990 to 1991 (Daily Interlake, February 1992). According to more recent figures the real estate boom is even greater this year with an 18% increase over 1991 figures (Daily Interlake, August 1992). A total of 330 subdivision applications were received in Flathead County in 1991. The County had already received 343 applications by August 28, 1992.

The increase in real estate sales in this area has two major impacts on wildlife and wildlife habitat. First, loss of habitat increases the value of the remaining habitat for wildlife. Species dependent on low elevation riparian areas are particularly affected since these habitats are very limited naturally and they are also preferred homesites or resort developments. In some areas of the state with similar wildlife/development issues, regulations are being considered to protect habitat. In Gallatin County, planners are proposing land-use regulations to protect wildlife, as developers prepare to build more homes in one of Montana's fastest growing areas (The Daily Inter Lake, July 1992). Secondly, the increase demand for Flathead area property has resulted in a dramatic increase in real estate prices. The cost of protecting habitat protection is also going to similarly increase. It is expected that this growth will continue for the next several years making future projects even more expensive. It can be argued that acquisition projects will be more cost effective sooner than later.

This is not to say that fee acquisition will play a major role in the overall Habitat Protection Project. It is just one of several tools available to achieve mitigation. It is would not be in the long term interest of the mitigation program to promote one protection tool over any other. For one main reason, mitigation funds could not support many acquisitions for the long term. A second reason would the lack of appropriate habitats owned by willing sellers.

The key to the success of the Habitat Protection Project does not lie with the particular strategy to either acquire habitat or not but more in the flexibility of the strategies. All opportunities to either enhance or protect wildlife habitat for the target species or species groups should be considered. In some cases, there may be opportunities to enhance existing public lands or manage private lands for wildlife. Cooperative projects will provide ways to complete activities not possible under a single program. Creative options explored to address both the habitat mitigation needs and the conflict over purchase of private lands should be explored. It may be possible where a critical property is available and there is a reasonable threat of habitat loss due to development, that mitigation funds could be used to temporarily acquire the property. Subsequently, a conservation easement could be placed on the property to protect the open space or other values and the property resold to a private party. Funds from the sale could be reinvested in other habitat protection activities.

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APPENDIX A

Radio locations of two male sharp-tailed grouse transplanted from British Columbia (September 1991 to April 1992)

Radio locations of two male sharp-tailed grouse transplanted from British Columbia

(September 1991 to April 1992)

GROUSE #658 (Male, Captured 4-18-90)

Date	Observer	Location	Habitat	Comments
09-20-91	LY	Sec.24	Grassland Bench	Quirk's Ranch
10-01-91	LY	Sec.24	Grassland Bench	Quirk's Ranch
10-06-91	LY	Sec.24	Grassland Bench	Quirk's Ranch
11-17-91	LY	Sec.23	Grassland Bench	Good Habitat Side
11-24-91	LY	Sec.23	Grassland	Good Habitat Side Trace Snow
12-07-91	LY	Sec.23	Grassland	No Snow Good Habitat
12-22-91	LY	Sec.12	Shrub/Grassland	1" Snow
12-29-91	LY	Sec.23	Grassland	Snow in Shade Only
01-04-92	LY	Sec.23	Grassland	Trace of Snow
01-12-92	LY	Sec.24	Grassland Bench	Quirk's 3-4" snow in valley
01-19-91	LY	Sec.19	Grassland Bench	Quirk's Snow on valley
01-28-92	LY	Sec.13	Grassland	East side of highway
02-01-92	LY	Sec.13	Grassland	No Snow
02-09-92	LY	Sec.13	Grassland	No Snow
02-15-92	LY	Sec.23	Grassland	No Snow, with 6 others
02-22-92	LY	Sec.23	Grassland	No Snow, with 1 other
03-01-92	LY	Sec.23	Grassland	No Snow
03-07-92	LY	Sec.23	Grassland	No Snow
03-14-92	LY	Sec.23	Grassland	No Snow
03-22-92	LY	bet.Sec.11,14	Grassland	No Snow
03-28-92	LY	Sec.11	Dance Ground #2	With 4 others
04-04-92	LY	Sec.11	Dance Ground #2	With 11 others
04-11-92	LY	Sec.14	Grassland	Predated (Collar and Feathers)

GROUSE #148 (Male, Captured 5-3-90)

Date	Observer	Location	Habitat	Comments
09-09-91	LY	Sec.26	Grassland-Kettles	
10-01-91	LY	Sec.24	Grassland	Quirk's Ranch
10-06-91	LY	Sec.24	Grassland Bench	Quirk's Ranch
10-26-91	LY	Sec.22	Edge Grass/Pine	With 6 others
10-28-91	LY	Sec.22	Forested-Kettle	
11-17-91	LY	Sec.22	Grass-Kettle	No Snow, valley
11-20-91	LY	Sec.26	Grassland	No Snow
11-24-91	LY	Sec.26	Grassland	Trace of Snow
12-01-91	LY	Sec.22	Edge Forested-Kettle	2" snow in valley
12-05-91	MW	Sec.22	Forested-Kettle	Owl Predation

APPENDIX B

List of agencies, organizations or individuals providing comments on the proposed McGregor Meadows Project

List of agencies, organizations or individuals providing comments on the proposed McGregor Meadows Project.

Publics	Favorable	Unfavorable	Neutral
Ducks Unlimited, Libby/Troy Chapter	X		
Ducks Unlimited, Flathead Chapter	X		
Montana Loon Society	X		
Flathead County Commissioners	X		
Eastern Sanders County Sportsmen Club	X		
Montana Bass Federation	X		
Ed Kennedy, Jr., Senator	X		
Chain of Lakes Advisory Council	X		
Dave Wanzenreid, Representative, House District 7	X		
Loren and Gynell Kujawa	X		
Flathead Audubon Society	X		
Flathead Wildlife, Inc.	X		
Harvey and Justin Paugh	X		
Western Montana Bassmasters	X		
Montana Wildlife Federation	X		
Montanans for Multiple Use			X*
Plum Creek Timber Company	X		
MT Department of Transportation	X		
Robert Ballou	X		
Flathead Land Trust	X		
Don Towe	X		
Bob Thornton	X		

Continued on next page.

Publics	Favorable	Unfavorable	Neutral
Libby Rod and Gun Club, Inc.	X		
Montana Trappers Association	X		
Glacier Gun Dog Club	X		
Bigfork Rod and Gun Club	X		
Laurie and Wilma Loney	X		
Bruce and Cindy Carrell	X		
Lincoln Harris			X
Lyle McHenry		X	
Marlene Linstead	X		
Chain of Lakes Homeowners Assn.	X		
Environmental Division, Corps of Engineers	X		

* Requested Additional Information